

REMARKS

Claims 1-19 are all the claims presently pending in the application. Claims 1 and 3-5 have been amended to more particularly define the invention. Claims 6-19 have been added to claim additional features of the invention.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claim 5 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Ohno (U.S. Patent No. 6,447,968 B1). Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tanikawa (U.S. Patent No. 5,364,722). Claim 4 stands rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Tanikawa. Claims 1-2 and 4-5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Ohno (U.S. Publication No. 2001/0033983).

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention (e.g., as defined in claim 1) is directed to an electrostatic charge image developing toner. The toner includes a fixing resin and a wax having a plurality of wax components. The following formulas are satisfied by the toner:

$$T = \sum_{N=1}^k T_n \cdot W_n / 100 \quad \dots (1)$$

$$T \geq 56 \quad \dots (2)$$

$$W_1 + W_2 + \dots W_k = 100 \quad \dots (3)$$

where T_n (°C) is an onset temperature of an absorbed heat quantity curve of a wax component N in a differential scanning calorimeter (DSC), K is a number of wax components, and W_n (wt%) is a compound rate occupied in the wax.

Conventionally, waxes are added to fixing resins in toners to improve the fixing performance of the toner. Low-melting-temperature waxes are used to improve the fixing performance of the toner by preventing the offset phenomenon. The low-melting-temperature

waxes, however, lower the heat resistance and durability of the toner. In order to improve this, waxes having a ratio of weight-average molecular weight/number-average molecular weight that is 1.5 or less. It is therefore difficult to improve the fixing performance of the toner while maintaining the heat resistance and the durability of the toner.

The claimed invention of exemplary claim 1, on the other hand, provides an electrostatic charge image developing toner that includes a wax having a plurality of wax components (e.g., see Application at page 8, lines 5-25).

This feature is important for providing a toner capable of achieving stable printing with limited variation due to the printing environment (see Application at page 7, line 24 through page 8, line 1). The wax having the plurality of wax components has a molecular weight distribution that is rationalized by combining the waxes. The molecular weight is rationalized by including an appropriate amount of a low molecular weight wax component in the wax (see Application at page 11, lines 14-20).

II. THE 35 USC §112, SECOND PARAGRAPH REJECTION

Claims 1-5 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner stated that claims 1 and 5 are indefinite because the phrase “one type of wax or K type (K is an integer in excess of 1) waxes” is unclear.

Applicants have amended claims 1 and 5 to overcome this rejection. Specifically, Applicants have amended claim 1 (and similarly claim 5) to recite, inter alia, “*a wax comprising a plurality of wax components*”.

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

III. THE PRIOR ART REFERENCES

A. The Ohno Reference

The Examiner alleges that Ohno teaches the claimed invention of claim 5. Applicants submit, however, that there are elements of the claimed invention which are neither taught nor suggested by Ohno.

That is, Ohno does not teach or suggest an electrostatic charge image developing toner

including “*a wax comprising a plurality of wax components*” as recited in claim 5

As noted above, unlike conventional toners, the claimed invention provides an electrostatic charge image developing toner that includes a wax having a plurality of wax components (e.g., see Application at page 8, lines 5-25). Again, this feature is important for providing a toner capable of achieving stable printing with limited variation due to the printing environment (see Application at page 7, line 24 through page 8, line 1). The wax having the plurality of wax components has a molecular weight distribution that is rationalized by combining the waxes. The molecular weight is rationalized by including an appropriate amount of a low molecular weight wax component in the wax (see Application at page 11, lines 14-20).

The novel features of the claimed invention are not taught or suggested by Ohno. Indeed, the Examiner attempts to rely on Figure 1, example 1 at columns 33-34, and column 35, line 55 through column 36, line 11 of Ohno to support her allegations. However, Applicants submit that the Examiner is clearly incorrect.

That is, nowhere, in this figure or passages (nor anywhere else for that matter) does Ohno teach or suggest an electrostatic charge image developing toner that includes a wax including a plurality of wax components. Indeed, the Examiner does not even allege that Ohno teaches or suggests this feature. In fact, the Examiner concedes that Ohno “does not exemplify the particular toner recited in the instant claims”.

The Examiner states in the Office Action that “a material (i.e., the toner) worked upon by the apparatus does not limit the apparatus claims”. The Examiner further states that “a recitation with respect to the material intended to be worked upon by a claimed apparatus does not impose any structural limitations upon the claimed apparatus which differentiates it from the prior art apparatus satisfying the structural limitations of that claimed”. Applicants respectfully disagree.

Specifically, Applicants have amended claim 5 such that it positively recites the “toner” as a claim element. That is, the claimed invention of amended claim 5 recites “an electrostatic charge image developing toner”. Applicants submit that the toner itself is an element of the apparatus as defined in claim 5 along with the electrostatic charge holding member and the developing unit.

Therefore, Applicants submit that there are elements of the claimed invention that are not taught or suggested by Ohno. Thus, Ohno clearly does not disclose, teach or suggest all of

the recitations of claim 5 and the rejection of claim 5 should be withdrawn.

B. The Tanikawa Reference

The Examiner alleges that Tanikawa teaches the claimed invention of claims 1-3. The Examiner further alleges that Tanikawa teaches (or in the alternative makes obvious) the claimed invention of claim 4. Applicants submit, however, that there are elements of the claimed invention which are neither taught nor suggested by Tanikawa.

That is, Tanikawa does not teach or suggest an electrostatic charge image developing toner including “*a wax comprising a plurality of wax components*” as recited in claim 1.

The novel features of the claimed invention are not taught or suggested by Tanikawa. Indeed, the Examiner attempts to rely on hydrocarbon wax A2 depicted in Table 7-1 at column 25 and Table 8 at column 26 of Tanikawa to support her allegations. However, the Examiner is clearly incorrect.

That is, nowhere, in these passages (nor anywhere else for that matter) does Tanikawa teach or suggest an electrostatic charge image developing toner that includes a wax having a plurality of wax components. Indeed, the Examiner does not even allege that Tanikawa teaches or suggests this feature. In fact, hydrocarbon wax A2 (as well as the other waxes disclosed in Tanikawa) includes a single wax. Each of the toners disclosed in Tanikawa merely includes a single wax (see Tables 7-1, 7-2 and 8).

Therefore, Applicants submit that there are elements of the claimed invention that are not taught or suggested by Tanikawa. Thus, Tanikawa clearly does not disclose, teach or suggest all of the recitations of claims 1-3 or claim 4 and the rejections of claims 1-3 and claim 4 should be withdrawn.

C. The Ohno ‘983 Reference

The Examiner alleges that Ohno ‘983 teaches the claimed invention of claims 1, 2, 4 and 5. Applicants submit, however, that there are elements of the claimed invention which are neither taught nor suggested by Ohno.

That is, Ohno ‘983 does not teach or suggest an electrostatic charge image developing toner including “*a wax comprising a plurality of wax components*” as recited in claim 1 and similarly recited in claim 5.

The novel features of the claimed invention are not taught or suggested by Ohno '983. Indeed, the Examiner attempts to rely on wax C described at paragraphs [0185] - [0188], [0192] and [0193], and in Table 3 at page 17 of Ohno '983 to support her allegations. However, the Examiner is clearly incorrect.

That is, nowhere, in these passages (nor anywhere else for that matter) does Ohno '983 teach or suggest an electrostatic charge image developing toner that includes a wax having a plurality of wax components. Indeed, the Examiner does not even allege that Ohno '983 teaches or suggests this feature. In fact, wax c (as well as the other waxes disclosed in Ohno '983) includes a single wax. Each of the toners disclosed in Tanikawa merely includes a single wax. Ohno '983 merely teaches different waxes that may be used in a toner (see Table 3). Nowhere, however, does Ohno '983 teach a plurality of waxes being used in combination in a toner.

Therefore, Applicants submit that there are elements of the claimed invention that are not taught or suggested by Ohno '983. Thus, Ohno '983 clearly does not disclose, teach or suggest all of the recitations of claim 1, 2, 4 and 5 and the rejection of claims 1, 2, 4 and 5 should be withdrawn.

III. NEW CLAIMS

New claims 6-19 have been added to provide more varied protection for the claimed invention and to claim additional features of the invention. These claims are independently patentable because of the novel features recited therein.

Applicants respectfully submit that new claims 6-19 are patentable over any combination of the applied references at least for analogous reasons to those set forth above with respect to claims 1-6.

IV. FORMAL MATTERS AND CONCLUSION

In response to Examiner's objections, the specification and claims have been amended in a manner believed fully responsive to all points raised by the Examiner.

In view of the foregoing, Applicant submits that claims 1-19, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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